DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-010916
Date Inspected: 26-Dec-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Li Yang

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG Trail Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations. Inspected 10% on a random basis and found the tension to be in general compliance and thus signed off the Green Tags.

At Segment 1AE to 1BE at Panel Point (PP) 10 (East) Longitudinal Diaphragm Stiffener to Floor Beam Stiffener (at Elevation 1800mm and 3250 mm above Bottom Panel) North and South side and Bolt Size used was M22 x 90 RC Set# DHGM220048 final torque required was 500 N-m and Green Tag No. 509.

At Segment 1AE to 1BE at Panel Point (PP) 10 (East) Longitudinal Diaphragm Stiffener to Floor Beam Stiffener (at Elevation 1800mm and 3250 mm above Bottom Panel) North and South side and Bolt Size used was M24 x 90 RC Set# DHGM240028 final torque required was 540 N-m and Green Tag No. 510.

At Segment 1AE to 1BE at Panel Point (PP) 9 to 12.5 Longitudinal Diaphragm Stiffener to Floor Beam Stiffener (at Elevation 1800mm and 3250 mm above Bottom Panel) North and South side and Bolt Size used was M24 x 80 RC Set# DHGM220050 final torque required was 486 N-m and Green Tag No. 511.

At Segment 1AE to 1BE at Panel Point (PP) 8.5 to 12.5 Longitudinal Diaphragm Stiffener to Floor Beam Stiffener (at Elevation 1800mm and 3250 mm above Bottom Panel) North and South side and Bolt Size used was M22 x 85 RC Set# DHGM220013 final torque required was 427 N-m and Green Tag No. 512.

At Segment 1AW and 1BW from Panel Point (between Panel Point (PP) 8.5 to PP 12.5 for Cable Tray Support and Bolt Size used was M19 x 80 RC Set# DHG60573 final torque required was 193 N-m respectively and Green Tag No. 513.

At Segment 1AW and 1BW from Panel Point (between Panel Point (PP) 8.5 to PP 12.5 for Cable Tray Support and Bolt Size used was M19 x 55 RC Set# DHG60571 final torque required was 393 N-m respectively and Green Tag No. 514.

Segment 6AW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Edge Panel Hold back area weld Counter Weight side for Segment 6AW between Panel Point (PP) 40 and PP 41. Weld Identified as CA025-005. The welder was identified as 037840. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-Tc-U4b-FCM-1.

Segment 6BW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Edge Panel Hold back area weld Counter Weight side for Segment 6BW between Panel Point (PP) 40 and PP 41. Weld Identified as CA027-001. The welder was identified as 037840. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-Tc-U4b-FCM-1.

Segment 6AE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Edge Panel Hold back area weld Cross Beam side for Segment 6AE between Panel Point (PP) 40 and PP 41. Weld Identified as Seg 028-043. The welder was identified as 220069. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2232-Tc-U4b-F.

Segment 6BE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Edge Panel Hold back area weld Cross Beam side for Segment 6BE between Panel Point (PP) 40 and PP 41. Weld Identified as CA014-001. The welder was identified as 220069. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2232-Tc-U4b-F.

Segment 6AE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Edge Panel Hold back area weld Cross Beam side for Segment 6AE between Panel Point (PP) 40 and PP 41. Weld Identified as Seg 028B-028. The welder was identified as 220069. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2232-Tc-U4b-F.

Segment 6BE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Edge Panel Hold back area weld Cross Beam side for Segment 6BE between Panel Point (PP) 40 and PP 41. Weld Identified as CA014-002. The welder was identified as 220069. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2232-Tc-U4b-F.

Segment 5AW to 5BW

This QA Inspector observed ZPMC personnel performing repair for Transverse Segment Splice for Segment 5AW to 5BW against ABF Ultrasonic Test (UT) report no. UT-5W-003 R2 Dated 12/24/2009 at four (4) locations for Side Panel weld no identified as OBW5A-003 and Y datum identified as 3150mm, 3170mm, 3690mm and 5845mm.

Segment 5BW to 5CW

This QA Inspector observed ZPMC personnel performing repair for Transverse Segment Splice for Segment 5BW to 5CW against ABF Ultrasonic Test (UT) report no. UT-5W-008 1/2 Dated 12/19/2009 at four (4) locations for Side Panel weld no identified as OBW5A-009/010 and Y datum identified as 3750mm, 4510mm, 4720mm and 5220mm.

Segment 6BE

This QA Inspector observed ZPMC personnel installing Angle plates for holding Traveler Plates at Bottom Panel and Angles plates installed between Bottom Panel to Floor Beam location near Cross Beam Longitudinal Diaphragm.

Segment 5AW to 5BW

This QA Inspector observed ZPMC personnel Magnetic Particle Test (MT) at Transverse splice for Bottom Panel T-Ribs Hold back welded areas.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

WELDING INSPECTION REPORT

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer